Re: Fw: Oxidant Question
Chris Ralston
to:
Scott Huling, JohnT Wilson
08/06/2012 04:22 PM
Cc:
David Burden, Jack Hwang, Claudette Reed, Kelly Smith
Hide Details
From: "Chris Ralston" <cralston@mde.state.md.us>
To: Scott Huling/ADA/USEPA/US@EPA, JohnT Wilson/ADA/USEPA/US@EPA,
Cc: David Burden/ADA/USEPA/US@EPA, Jack Hwang/R3/USEPA/US@EPA,
Claudette Reed/R3/USEPA/US@EPA, Kelly Smith/ADA/USEPA/US@EPA

1 Attachment

IMAGE.gif

Scott and others,

Thank you for the rapid response, it is appreciated. I will follow up with Scott on some particulars in the coming days/week.

Thanks again,

Christopher Ralston
Program Administrator
Oil Control Program
Maryland Department of the Environment
1800 Washington Blvd., Ste 620
Baltimore MD 21230-1719
410-537-3470
410-537-3092 fax
>>>

> **From:** Scott Huling <huling.scott@epamail.epa.gov>
> **To:** JohnT Wilson <Wilson.JohnT@epamail.epa.gov>
> **CC:** <cralston@mde.state.md.us>, Kelly Smith <Smith.Kelly@epamail.epa.gov>, David Burden <Burden.David@epamail.epa.gov>, Jack Hwang <Hwang.Jack@epamail.epa.gov>, Claudette Reed <Reed.Claudette@epamail.epa.gov>
> **Date:** 8/6/2012 10:59 AM
> **Subject:** Re: Fw: Oxidant Question
>
> Christopher,
>
> Regarding the metals mobilization, I sent this e-mail to Bill Hagel (Region 3 STL) earlier this morning to address the issue, and I think he will be forwarding it to you sometime soon. Regarding the use of oxidants for petroleum/MTBE, you can contact me directly with your question. Scott
>
> _____
> I agree with the general trend that formation of Cr+6 is a transient condition. A study was done a couple years ago looking at 20+ sites for metals mobilization. The conclusion was that it is a transient condition

and no long term metals mobilization was found. I am not aware of a site where metals mobilization has presented a long term issue. I keep my eyes open, however, that it could happen under the right conditions so I always recommend a good monitoring program if it is a suspected issue.

The answer to your question is entirely site specific. For example, mass and type of oxidant, concentration of Cr(III), ground water flow rate, background redox, location of potential receptors, etc. That being said, there are two practical yet general methods that might be used to help address this question (btw, batch tests generally provide limited insight). First, a small-scale pilot study can provide useful information as it will provide actual site specific data on formation and transport of Cr+6 without incurring significant risk. Second, assuming a pilot study has been done and there are limited risks of Cr+6, and full-scale ISCO deployment is planned/desired, (1) develop a monitoring system that targets Cr+3/Cr+6, and (2) develop a contingency plan assuming unacceptable Cr+6 concentrations persist across some predetermined boundary.

Scott

Scott G. Huling, Ph.D., P.E.
Environmental Engineer
U.S. Environmental Protection Agency
Robert S. Kerr Environmental Research Center
P.O. Box 1198 (or, 919 Kerr Lab Drive)
Ada, OK 74820

JohnT Wilson---08/06/2012 09:51:13 AM---Hi Christopher: I would send an e-mail enquiry to Scott Huling. He is our EPA/ORD in-house expert

From: JohnT Wilson/ADA/USEPA/US
To: cralston@mde.state.md.us
Cc: Scott Huling/ADA/USEPA/US@EPA, Kelly Smith/ADA/USEPA/US@EPA, David Burden/ADA/USEPA/US@EPA, Jack Hwang/R3/USEPA/US@EPA, Claudette Reed/R3/USEPA/US@EPA
Date: 08/06/2012 09:51 AM
Subject: Re: Fw: Oxidant Question

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Hi Christopher:

I would send an e-mail enquiry to Scott Huling. He is our EPA/ORD in-house expert on chemical oxidation. You can reach Dr. Huling at huling.scott@epa.gov.

John

Jack Hwang---08/06/2012 07:28:16 AM---John, Good morning!

From: Jack Hwang/R3/USEPA/US
To: JohnT Wilson/ADA/USEPA/US@EPA
Date: 08/06/2012 07:28 AM
Subject: Fw: Oxidant Question

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John,

> Good morning!
> Chris of MDE was looking for EPA contact person(s) who has direct knowledge of the use of chemical oxidants for petroleum/MTBE remediation and the potential effects of oxidizing Cr(III) to Cr (VI). Do you know of someone in EPA can help Chris? Thanks. Jack

Jack Hwang
US EPA Region III in Philadelphia
215-814-3387 (Phone); 215-814-3163 (Fax)
hwang.jack@epa.gov
----- Forwarded by Jack Hwang/R3/USEPA/US on 08/06/2012 08:17 AM -----

From: Claudette Reed/R3/USEPA/US
To: Jack Hwang/R3/USEPA/US@EPA
Date: 08/03/2012 04:20 PM
Subject: Fw: Oxidant Question

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Hi Jack,

Let me know if you know of someone that Chris can speak to? Is there anyone in Superfund who might be able to help?

Claudette M. Reed | Team Leader
Underground Storage Tank / Leaking Underground Storage Tank Program
U.S. EPA - Region 3 (Philadelphia)
Land & Chemicals Division
Office of State Programs (3LC50)
1650 Arch Street | Philadelphia, PA 19103
Phone: 215 • 814 • 2997 | Fax: 215 • 814 • 3163
www.epa.gov/reg3wcmd/underground_storage.htm

----- Forwarded by Claudette Reed/R3/USEPA/US on 08/03/2012 04:19 PM -----

From: Joanne Cassidy/R3/USEPA/US
To: "Chris Ralston" <cralston@mde.state.md.us>
Cc: Claudette Reed/R3/USEPA/US@EPA, Rick Rogers/R3/USEPA/US@EPA
Date: 08/03/2012 10:21 AM
Subject: Re: Oxidant Question

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Christopher,

I am forwarding your question to Jack Hwang, who may be of help to you, along with either Rick or Claudette.

Joanne Cassidy
US EPA Region III
Phone: 215/814-3381
Fax: 215/814-3163
E-mail: cassidy.joanne@epa.gov

"Chris Ralston" ---08/03/2012 10:09:38 AM---Joanne and Claudette,

From: "Chris Ralston" <cralston@mde.state.md.us>
To: Joanne Cassidy/R3/USEPA/US@EPA, Claudette Reed/R3/USEPA/US@EPA
Cc: Rick Rogers/R3/USEPA/US@EPA
Date: 08/03/2012 10:09 AM
Subject: Oxidant Question

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Joanne and Claudette,

I was wondering if you could point me towards a contact within EPA that has direct knowledge of the use of chemical oxidants for petroleum/MTBE remediation and the potential effects of oxidizing Cr(III) to Cr(VI). Literature I have found from EPA and ITRC states that this occurs, but generally the reduction back to Cr(III) occurs within a short distance and period of time. I am not able to really get from the literature how short of a period of time and how short of a distance this is.

If there is someone in ORD or other office that I can contact, I'd appreciate that.

Thanks,

Christopher Ralston
Program Administrator
Oil Control Program
Maryland Department of the Environment
1800 Washington Blvd., Ste 620
Baltimore MD 21230-1719
410-537-3470

410-537-3092 fax



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